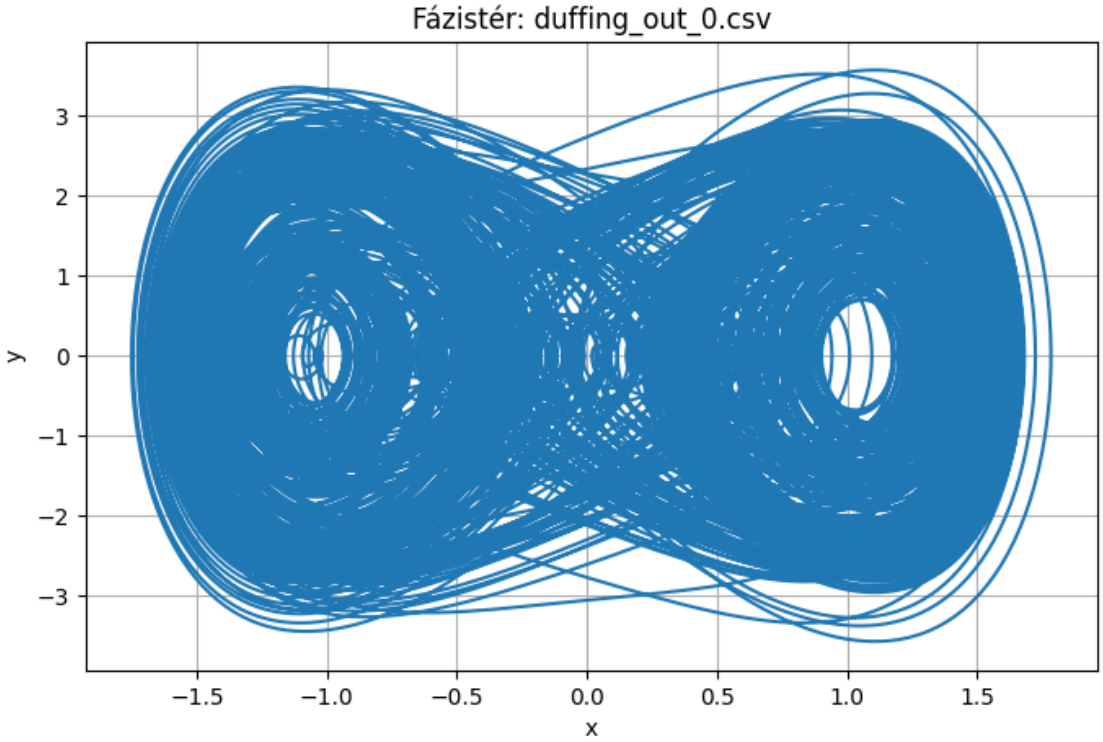
duffing_plotter

June 2, 2025

[1]:
```
#  Könyvtárak betöltése
import matplotlib.pyplot as plt
import pandas as pd
```

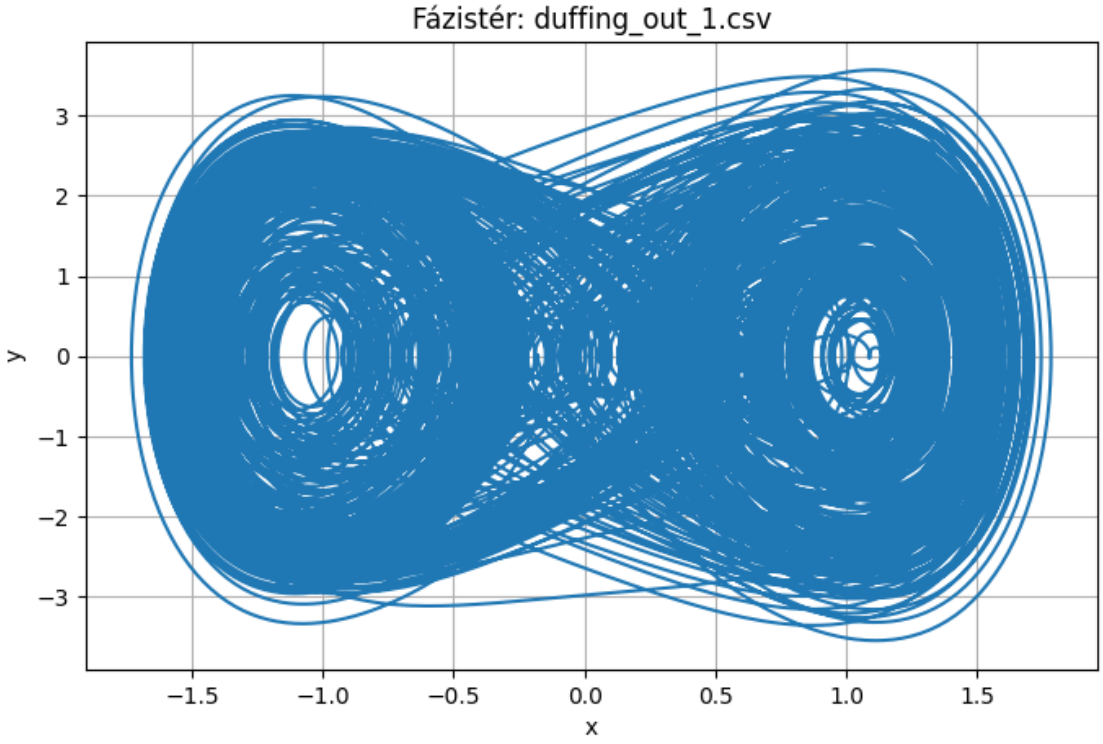
0.1 Fázistérgörbe – `duffing_out_0.csv`

[2]:
```
# Fázistér görbe - duffing_out_0.csv
df = pd.read_csv("duffing_out_0.csv")
plt.figure(figsize=(8, 5))
plt.plot(df['x'], df['y'])
plt.title("Fázistér: duffing_out_0.csv")
plt.xlabel("x")
plt.ylabel("y")
plt.grid(True)
plt.show()
```



0.2 Fázistérgörbe – duffing_out_1.csv

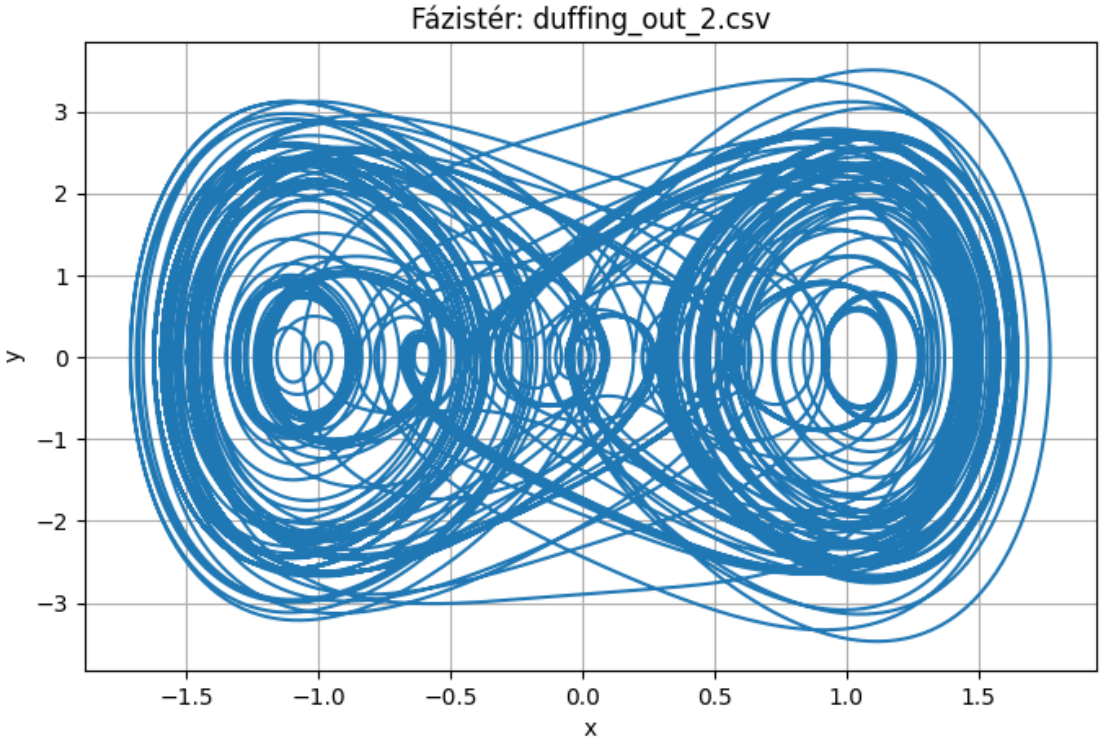
[3]:
```
# Fázistér görbe - duffing_out_1.csv
df = pd.read_csv("duffing_out_1.csv")
plt.figure(figsize=(8, 5))
plt.plot(df['x'], df['y'])
plt.title("Fázistér: duffing_out_1.csv")
plt.xlabel("x")
plt.ylabel("y")
plt.grid(True)
plt.show()
```



0.3 Fázistérgörbe – duffing_out_2.csv

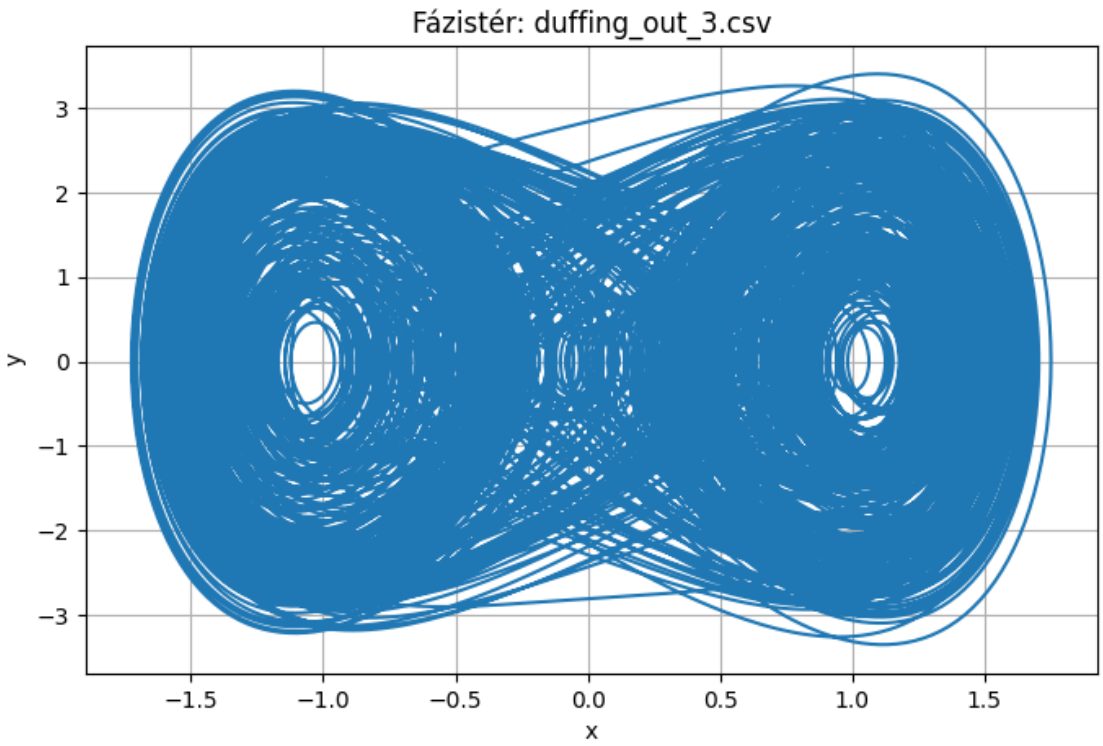
[4]:
```
# Fázistér görbe - duffing_out_2.csv
df = pd.read_csv("duffing_out_2.csv")
plt.figure(figsize=(8, 5))
plt.plot(df['x'], df['y'])
plt.title("Fázistér: duffing_out_2.csv")
plt.xlabel("x")
```

```
plt.ylabel("y")
plt.grid(True)
plt.show()
```



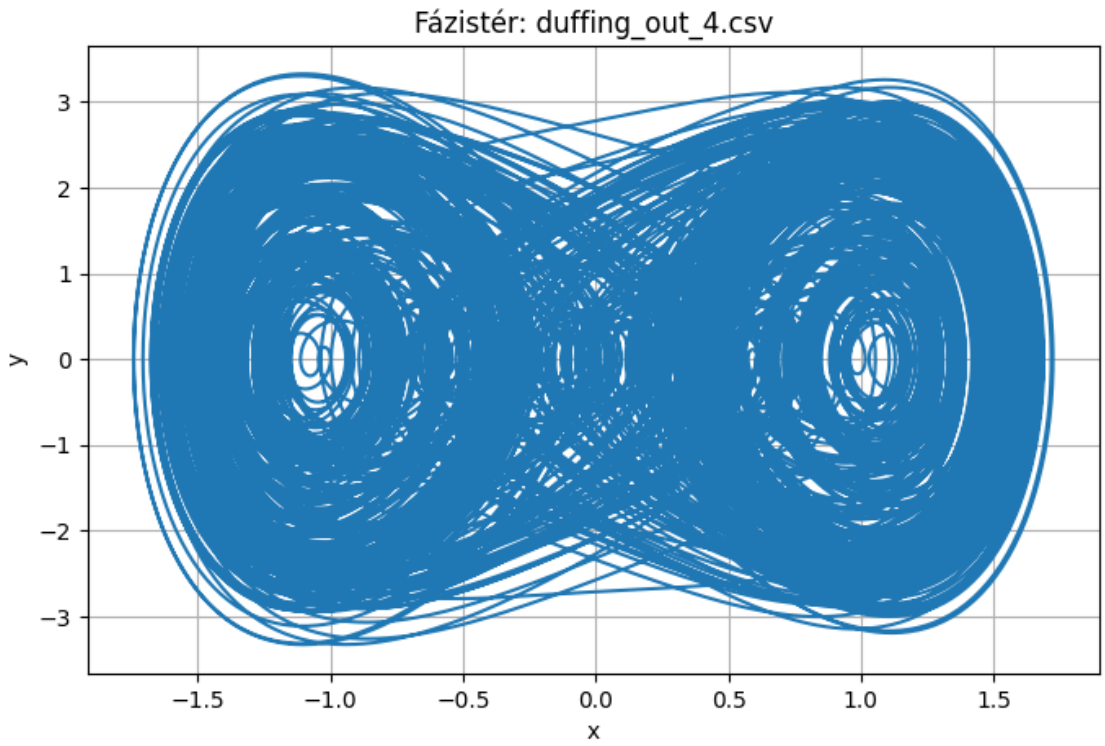
0.4 Fázistérgörbe – `duffing_out_3.csv`

[5]:
```
# Fázistér görbe - duffing_out_3.csv
df = pd.read_csv("duffing_out_3.csv")
plt.figure(figsize=(8, 5))
plt.plot(df['x'], df['y'])
plt.title("Fázistér: duffing_out_3.csv")
plt.xlabel("x")
plt.ylabel("y")
plt.grid(True)
plt.show()
```



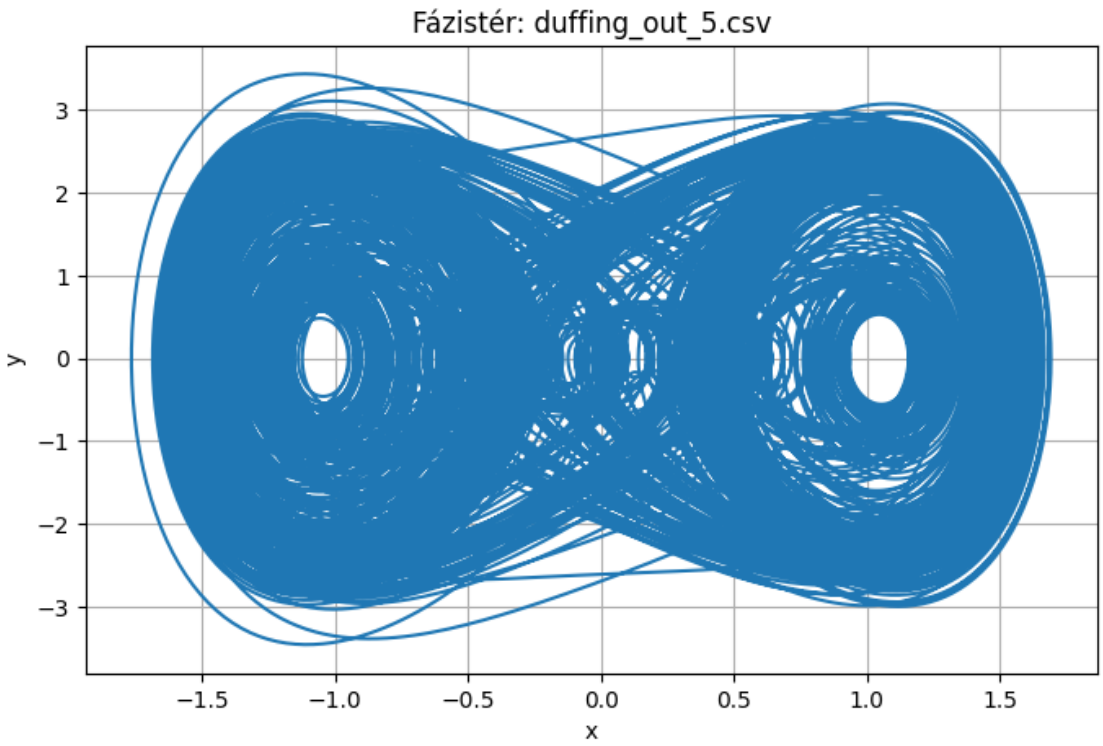
0.5 Fázistérgörbe – `duffing_out_4.csv`

[6]:
```
# Fázistér görbe - duffing_out_4.csv
df = pd.read_csv("duffing_out_4.csv")
plt.figure(figsize=(8, 5))
plt.plot(df['x'], df['y'])
plt.title("Fázistér: duffing_out_4.csv")
plt.xlabel("x")
plt.ylabel("y")
plt.grid(True)
plt.show()
```



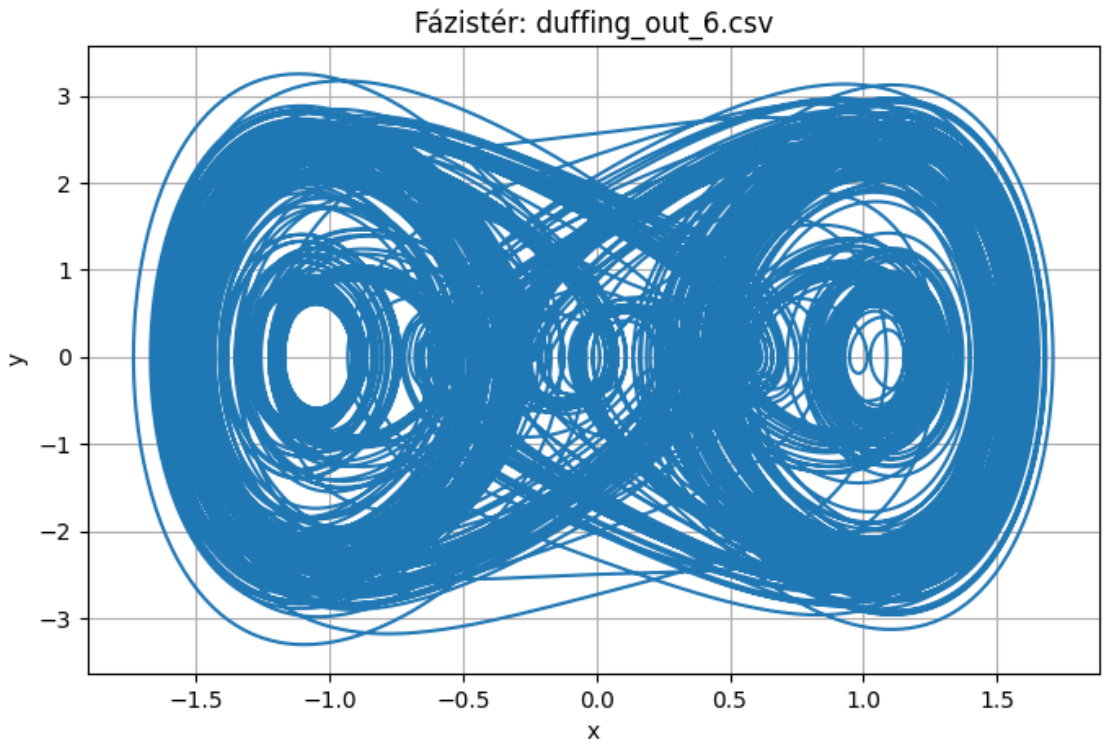
0.6 Fázistérgörbe – `duffing_out_5.csv`

[7]:
```
# Fázistér görbe - duffing_out_5.csv
df = pd.read_csv("duffing_out_5.csv")
plt.figure(figsize=(8, 5))
plt.plot(df['x'], df['y'])
plt.title("Fázistér: duffing_out_5.csv")
plt.xlabel("x")
plt.ylabel("y")
plt.grid(True)
plt.show()
```



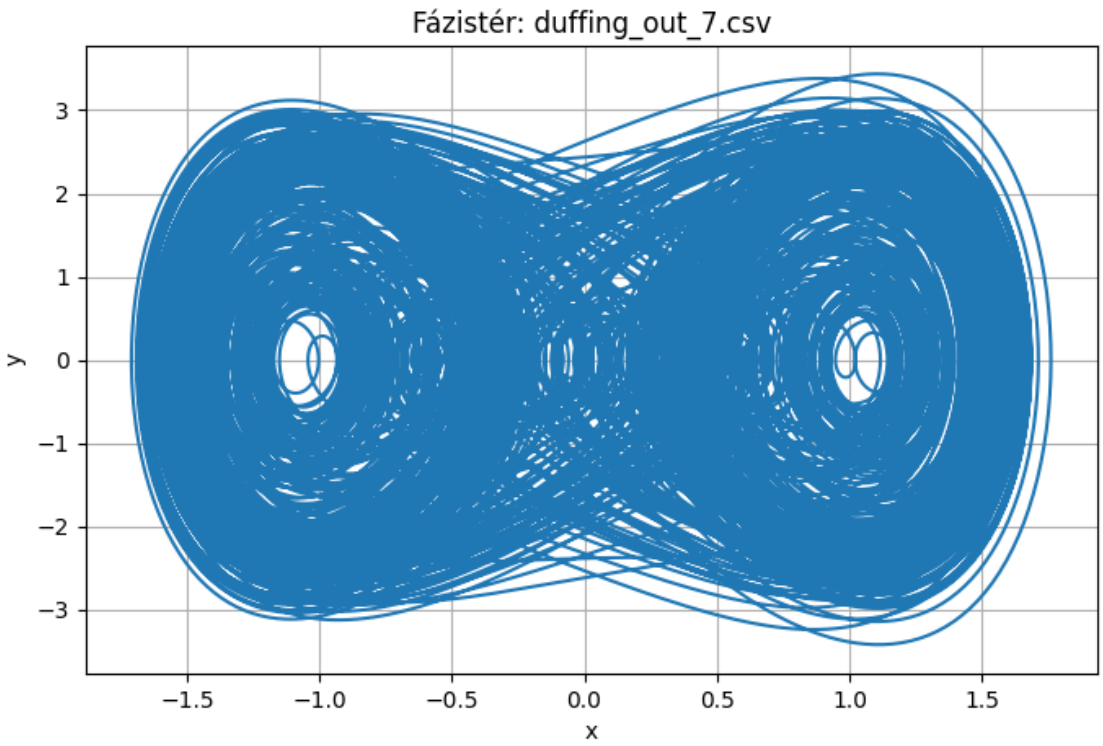
0.7 Fázistérgörbe – `duffing_out_6.csv`

[8]:
```
# Fázistér görbe - duffing_out_6.csv
df = pd.read_csv("duffing_out_6.csv")
plt.figure(figsize=(8, 5))
plt.plot(df['x'], df['y'])
plt.title("Fázistér: duffing_out_6.csv")
plt.xlabel("x")
plt.ylabel("y")
plt.grid(True)
plt.show()
```



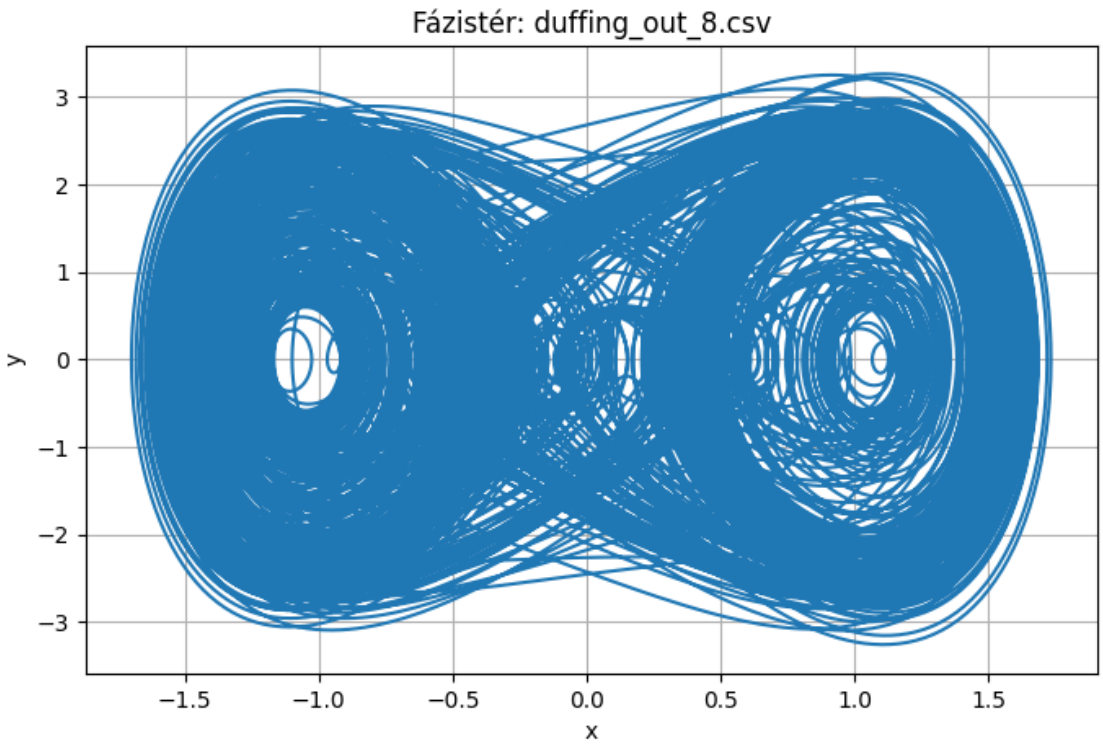
0.8 Fázistérgörbe – `duffing_out_7.csv`

[9]:
```
# Fázistér görbe - duffing_out_7.csv
df = pd.read_csv("duffing_out_7.csv")
plt.figure(figsize=(8, 5))
plt.plot(df['x'], df['y'])
plt.title("Fázistér: duffing_out_7.csv")
plt.xlabel("x")
plt.ylabel("y")
plt.grid(True)
plt.show()
```



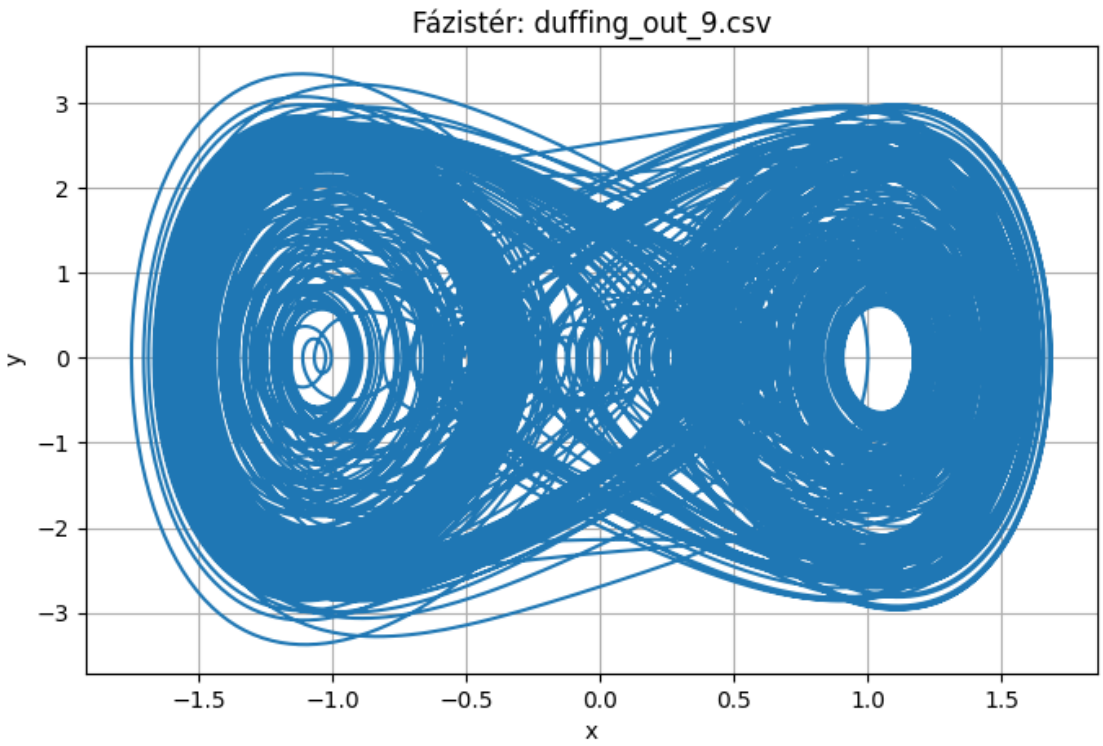
0.9 Fázistérgörbe – `duffing_out_8.csv`

[10]:
```
# Fázistér görbe - duffing_out_8.csv
df = pd.read_csv("duffing_out_8.csv")
plt.figure(figsize=(8, 5))
plt.plot(df['x'], df['y'])
plt.title("Fázistér: duffing_out_8.csv")
plt.xlabel("x")
plt.ylabel("y")
plt.grid(True)
plt.show()
```



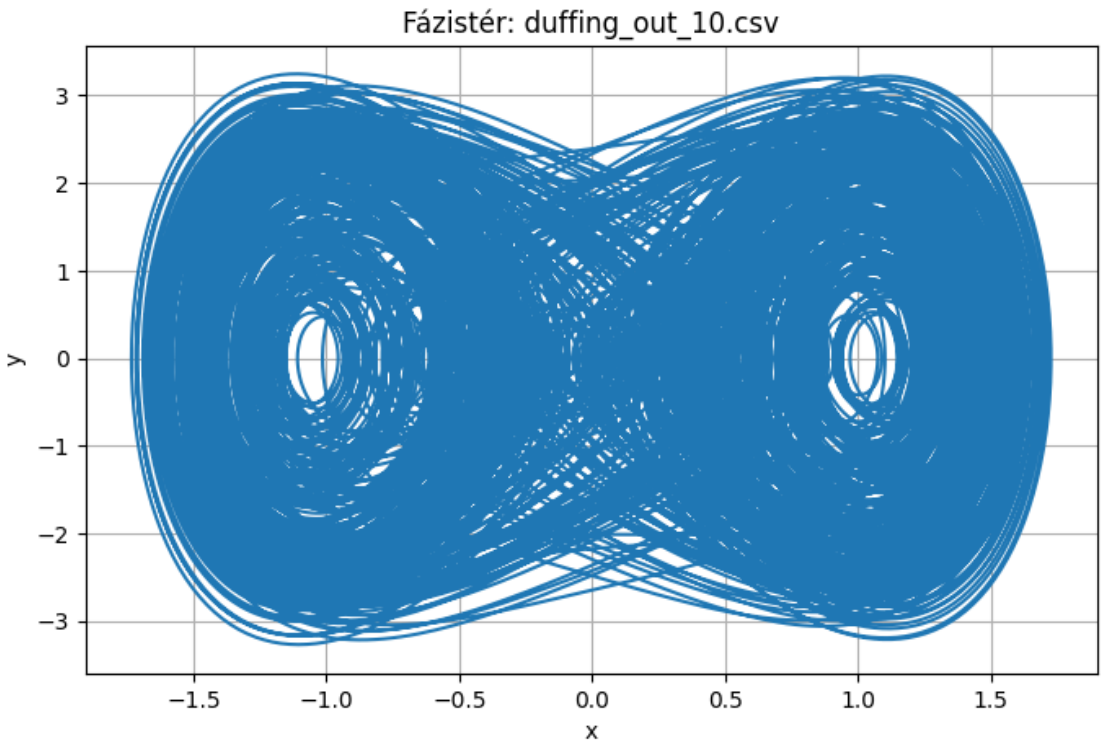
0.10 Fázistérgörbe – `duffing_out_9.csv`

[11]:
```
# Fázistér görbe - duffing_out_9.csv
df = pd.read_csv("duffing_out_9.csv")
plt.figure(figsize=(8, 5))
plt.plot(df['x'], df['y'])
plt.title("Fázistér: duffing_out_9.csv")
plt.xlabel("x")
plt.ylabel("y")
plt.grid(True)
plt.show()
```



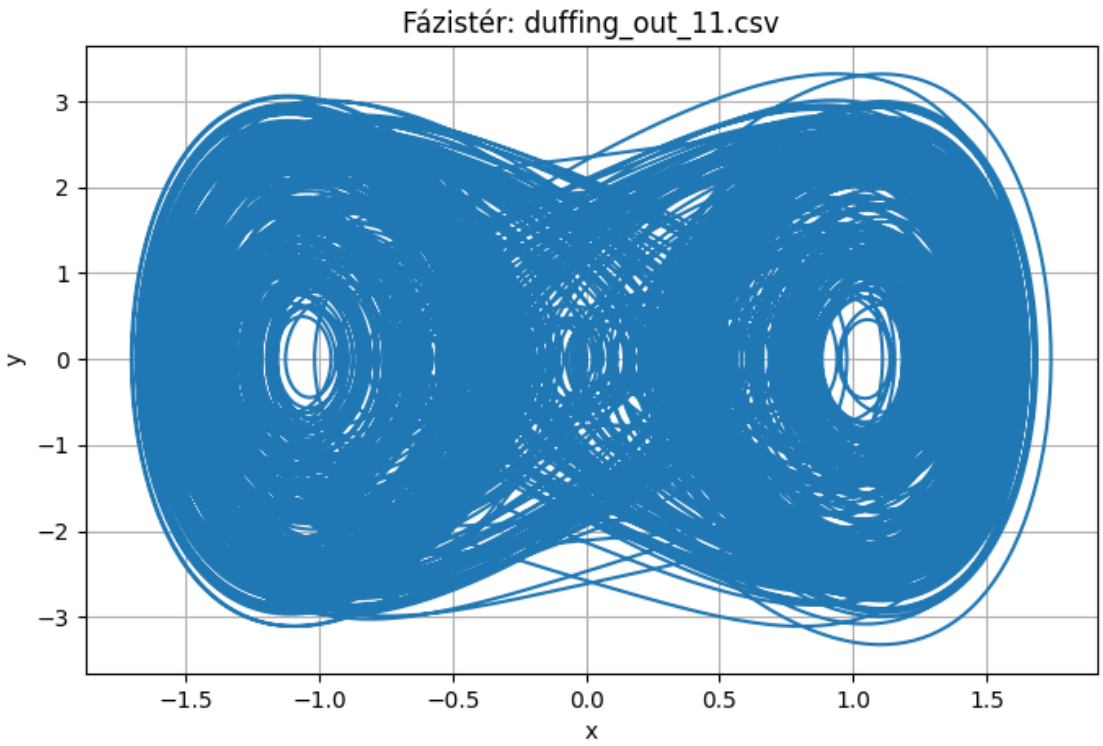
0.11 Fázistérgörbe – `duffing_out_10.csv`

[12]:
```
# Fázistér görbe - duffing_out_10.csv
df = pd.read_csv("duffing_out_10.csv")
plt.figure(figsize=(8, 5))
plt.plot(df['x'], df['y'])
plt.title("Fázistér: duffing_out_10.csv")
plt.xlabel("x")
plt.ylabel("y")
plt.grid(True)
plt.show()
```



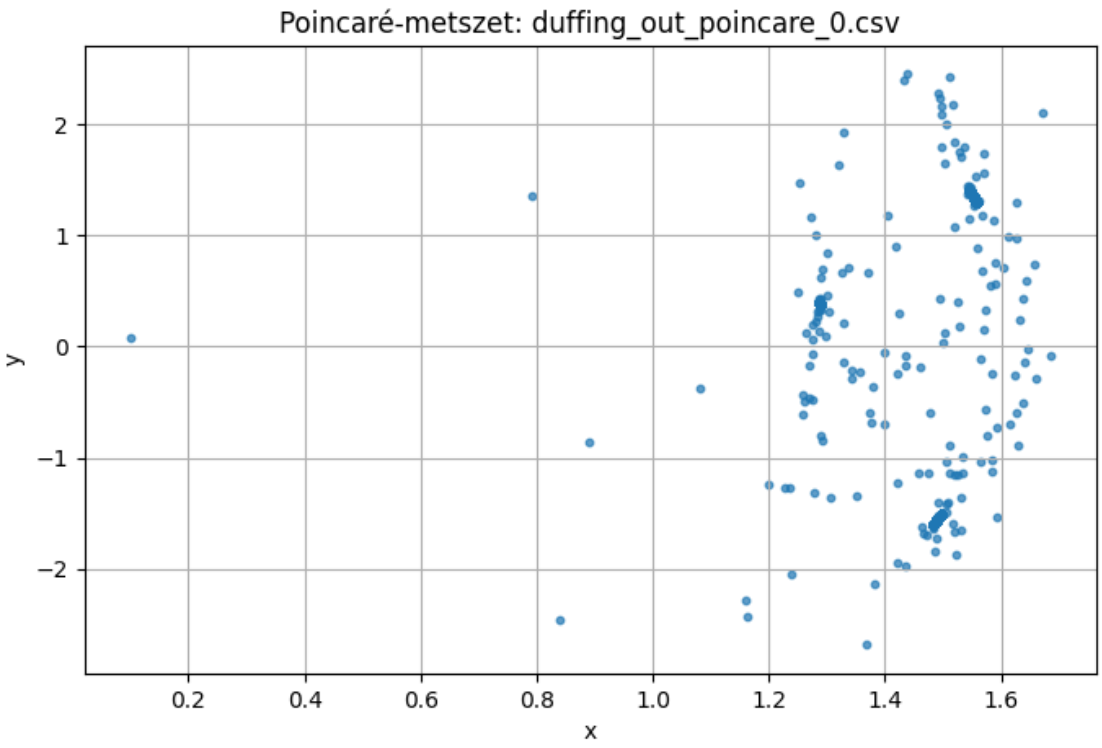
0.12 Fázistérgörbe – `duffing_out_11.csv`

[13]:
```
# Fázistér görbe - duffing_out_11.csv
df = pd.read_csv("duffing_out_11.csv")
plt.figure(figsize=(8, 5))
plt.plot(df['x'], df['y'])
plt.title("Fázistér: duffing_out_11.csv")
plt.xlabel("x")
plt.ylabel("y")
plt.grid(True)
plt.show()
```



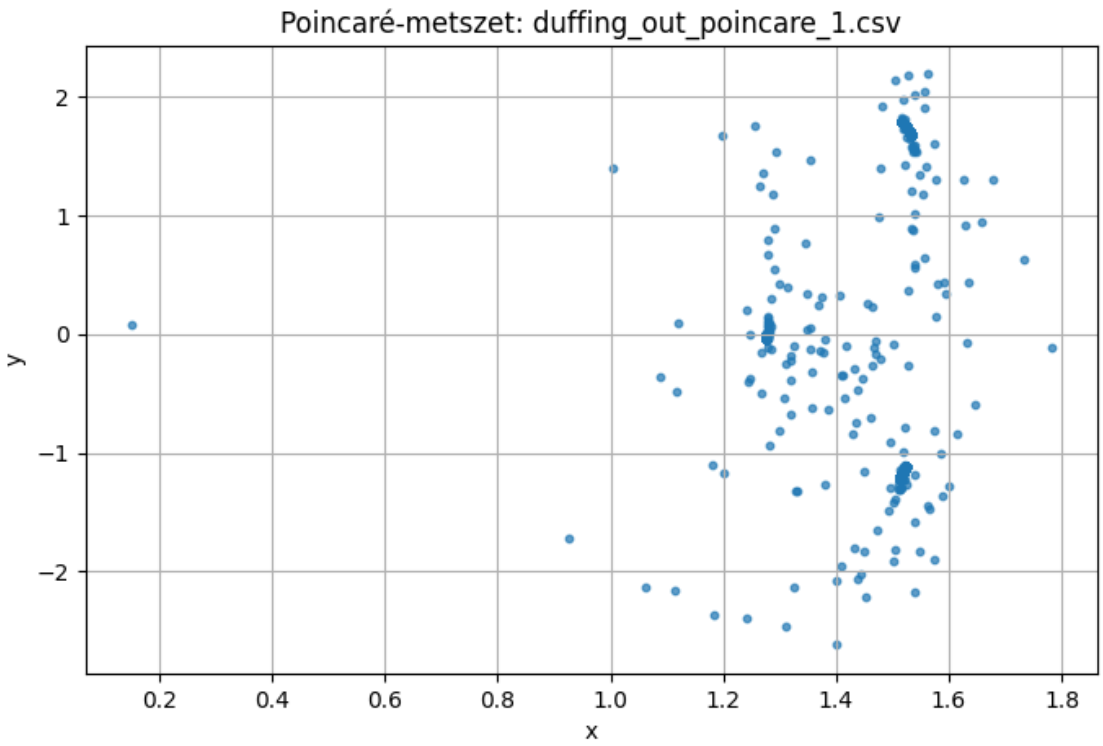
0.13 Poincaré-metszet – `duffing_out_poincare_0.csv`

[14]:
```
# Poincaré-metszet - duffing_out_poincare_0.csv
df = pd.read_csv("duffing_out_poincare_0.csv")
plt.figure(figsize=(8, 5))
plt.scatter(df['x'], df['y'], s=10, alpha=0.7)
plt.title("Poincaré-metszet: duffing_out_poincare_0.csv")
plt.xlabel("x")
plt.ylabel("y")
plt.grid(True)
plt.show()
```



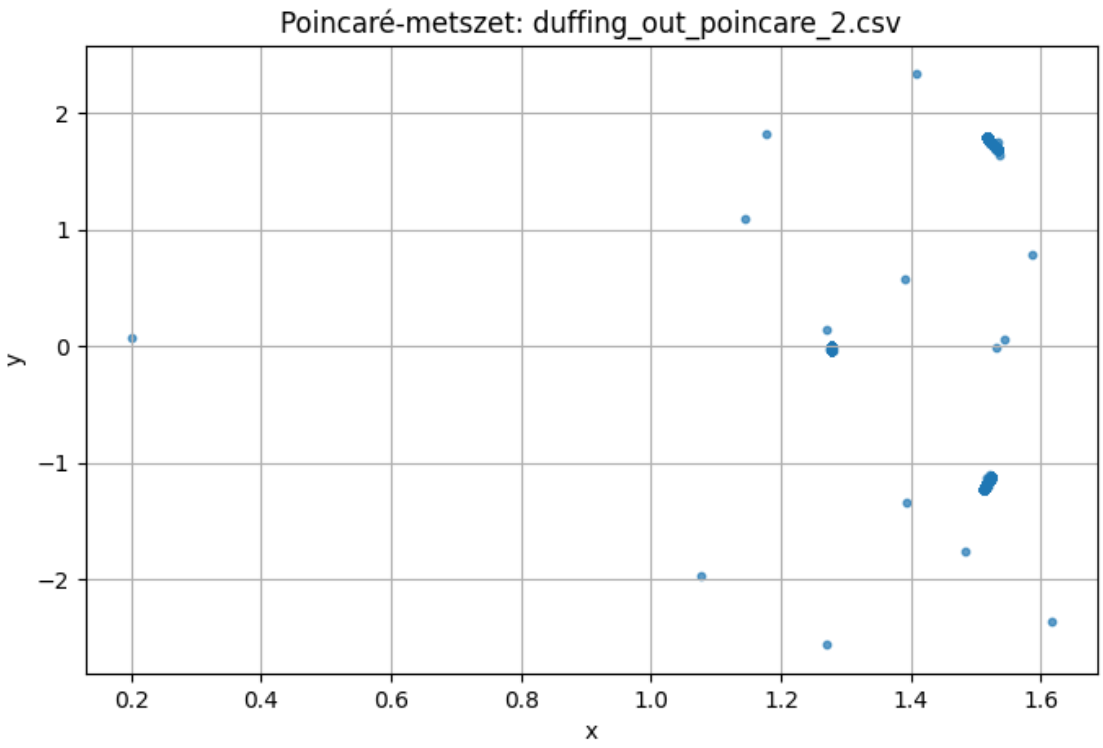
0.14 Poincaré-metszet – `duffing_out_poincare_1.csv`

[15]:
```
# Poincaré-metszet - duffing_out_poincare_1.csv
df = pd.read_csv("duffing_out_poincare_1.csv")
plt.figure(figsize=(8, 5))
plt.scatter(df['x'], df['y'], s=10, alpha=0.7)
plt.title("Poincaré-metszet: duffing_out_poincare_1.csv")
plt.xlabel("x")
plt.ylabel("y")
plt.grid(True)
plt.show()
```



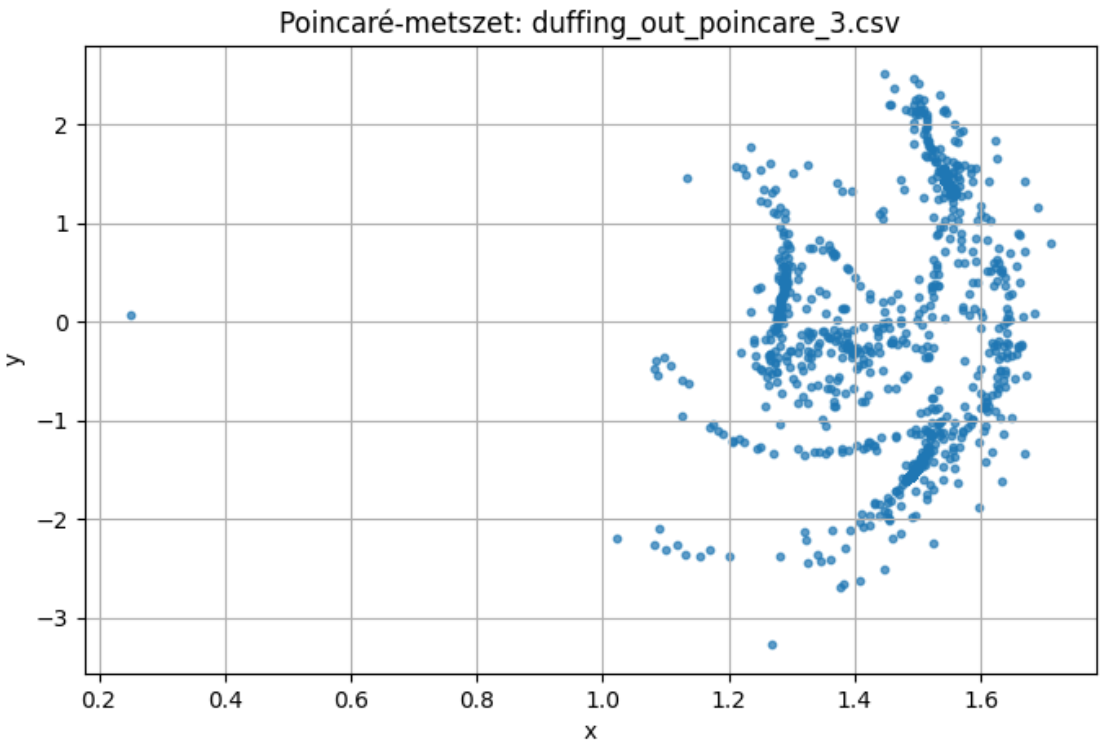
0.15 Poincaré-metszet – `duffing_out_poincare_2.csv`

[16]:
```
# Poincaré-metszet - duffing_out_poincare_2.csv
df = pd.read_csv("duffing_out_poincare_2.csv")
plt.figure(figsize=(8, 5))
plt.scatter(df['x'], df['y'], s=10, alpha=0.7)
plt.title("Poincaré-metszet: duffing_out_poincare_2.csv")
plt.xlabel("x")
plt.ylabel("y")
plt.grid(True)
plt.show()
```



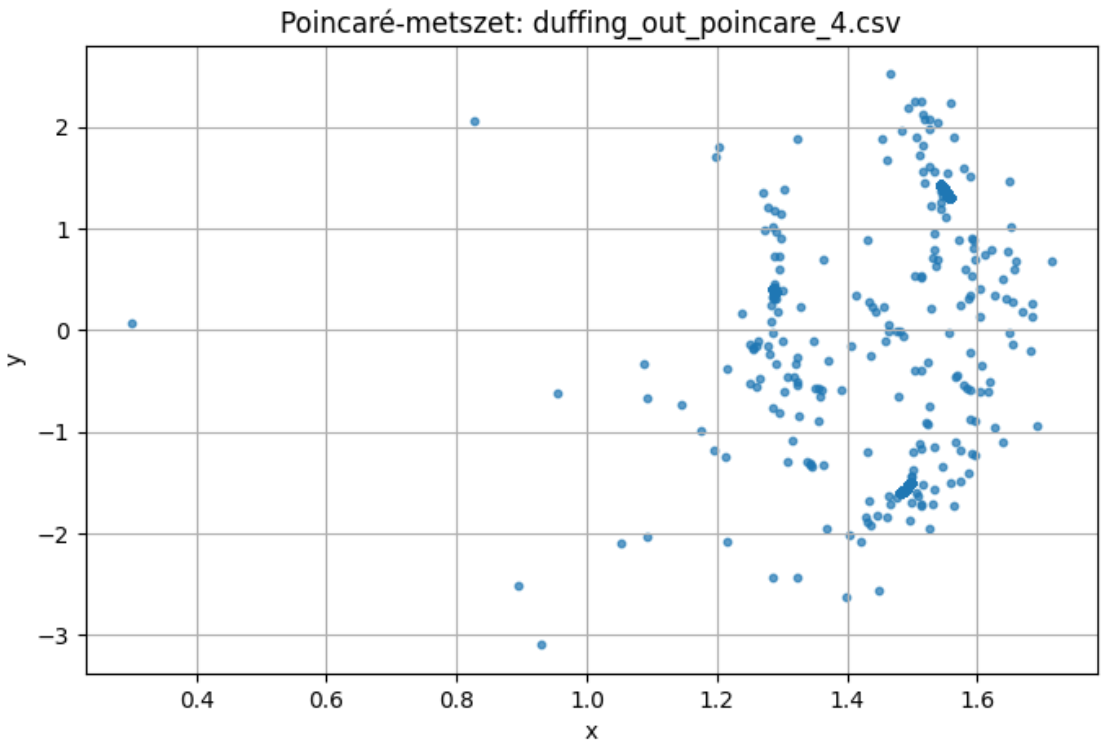
0.16 Poincaré-metszet – `duffing_out_poincare_3.csv`

[17]:
```
# Poincaré-metszet - duffing_out_poincare_3.csv
df = pd.read_csv("duffing_out_poincare_3.csv")
plt.figure(figsize=(8, 5))
plt.scatter(df['x'], df['y'], s=10, alpha=0.7)
plt.title("Poincaré-metszet: duffing_out_poincare_3.csv")
plt.xlabel("x")
plt.ylabel("y")
plt.grid(True)
plt.show()
```



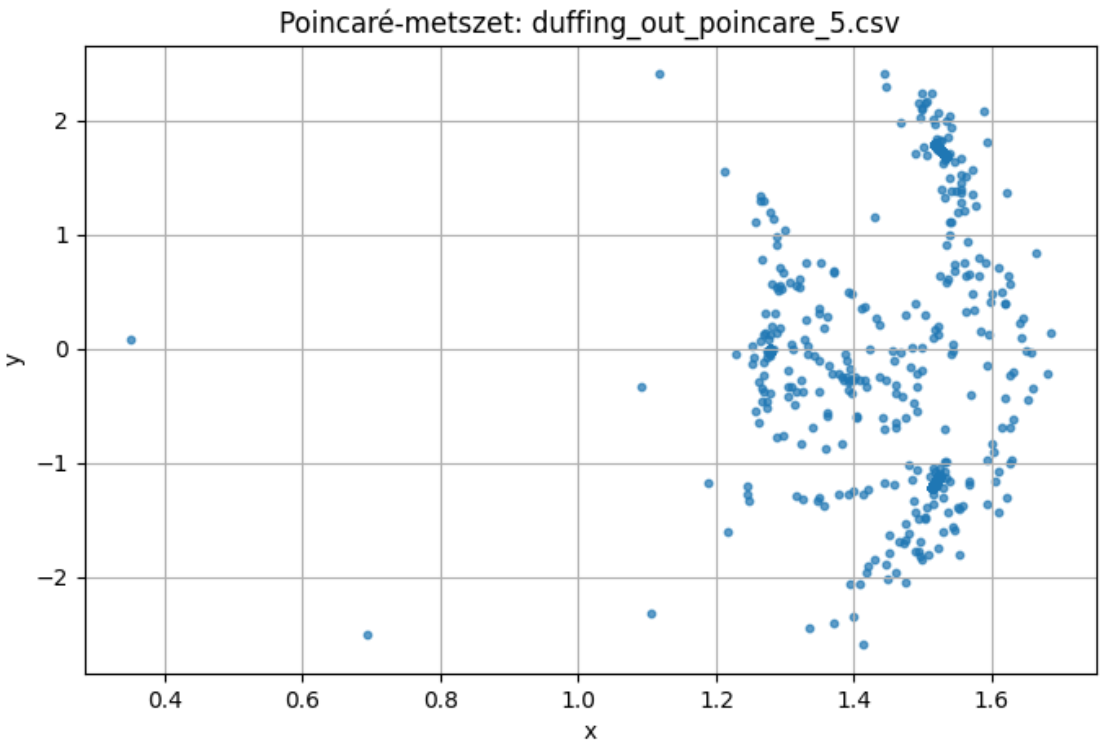
0.17 Poincaré-metszet – `duffing_out_poincare_4.csv`

[18]:
```
# Poincaré-metszet - duffing_out_poincare_4.csv
df = pd.read_csv("duffing_out_poincare_4.csv")
plt.figure(figsize=(8, 5))
plt.scatter(df['x'], df['y'], s=10, alpha=0.7)
plt.title("Poincaré-metszet: duffing_out_poincare_4.csv")
plt.xlabel("x")
plt.ylabel("y")
plt.grid(True)
plt.show()
```



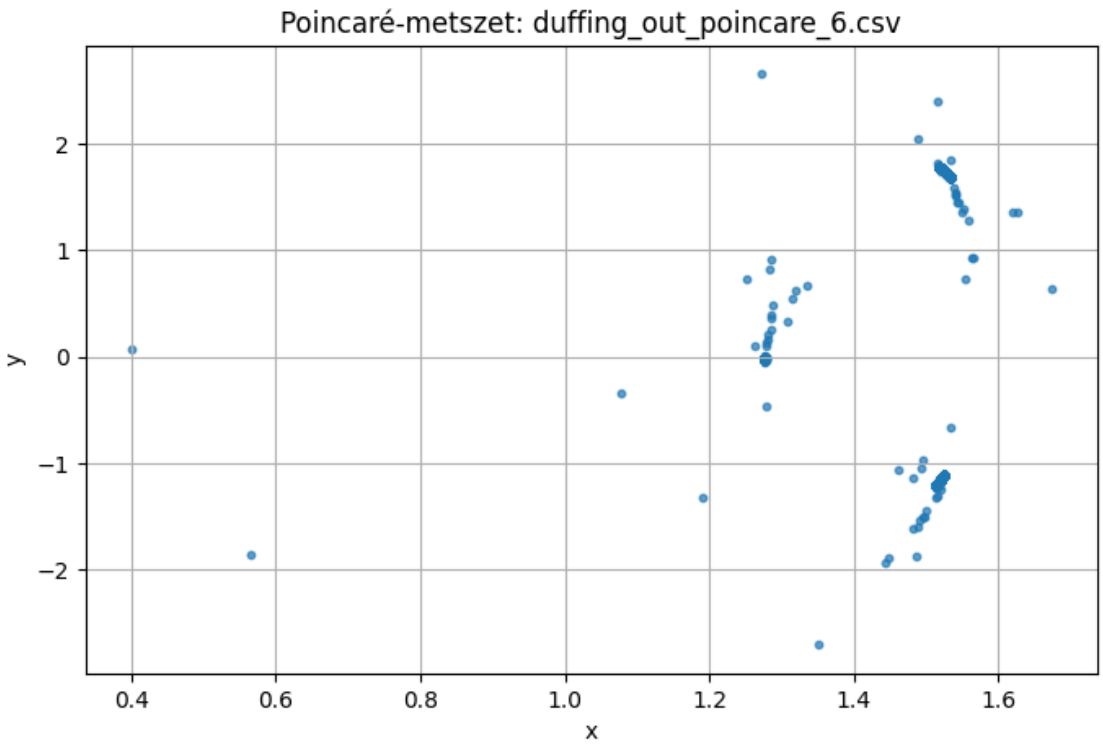
0.18 Poincaré-metszet – `duffing_out_poincare_5.csv`

[19]:
```
# Poincaré-metszet - duffing_out_poincare_5.csv
df = pd.read_csv("duffing_out_poincare_5.csv")
plt.figure(figsize=(8, 5))
plt.scatter(df['x'], df['y'], s=10, alpha=0.7)
plt.title("Poincaré-metszet: duffing_out_poincare_5.csv")
plt.xlabel("x")
plt.ylabel("y")
plt.grid(True)
plt.show()
```



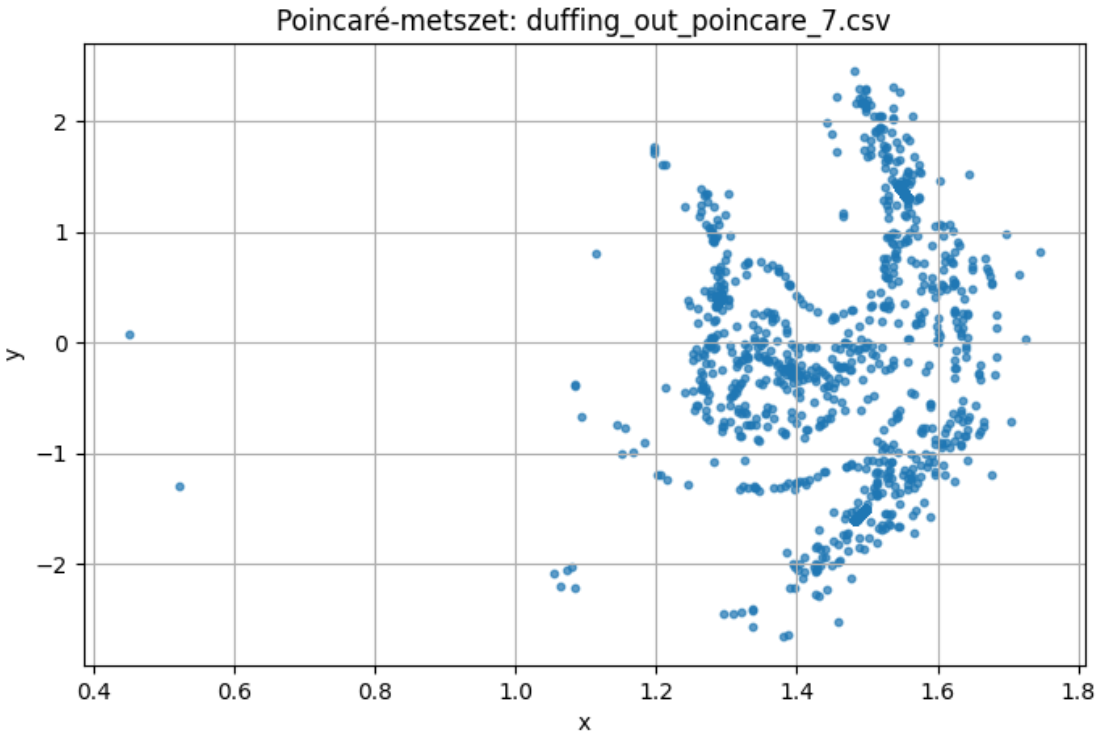
0.19 Poincaré-metszet – `duffing_out_poincare_6.csv`

[20]:
```
# Poincaré-metszet - duffing_out_poincare_6.csv
df = pd.read_csv("duffing_out_poincare_6.csv")
plt.figure(figsize=(8, 5))
plt.scatter(df['x'], df['y'], s=10, alpha=0.7)
plt.title("Poincaré-metszet: duffing_out_poincare_6.csv")
plt.xlabel("x")
plt.ylabel("y")
plt.grid(True)
plt.show()
```



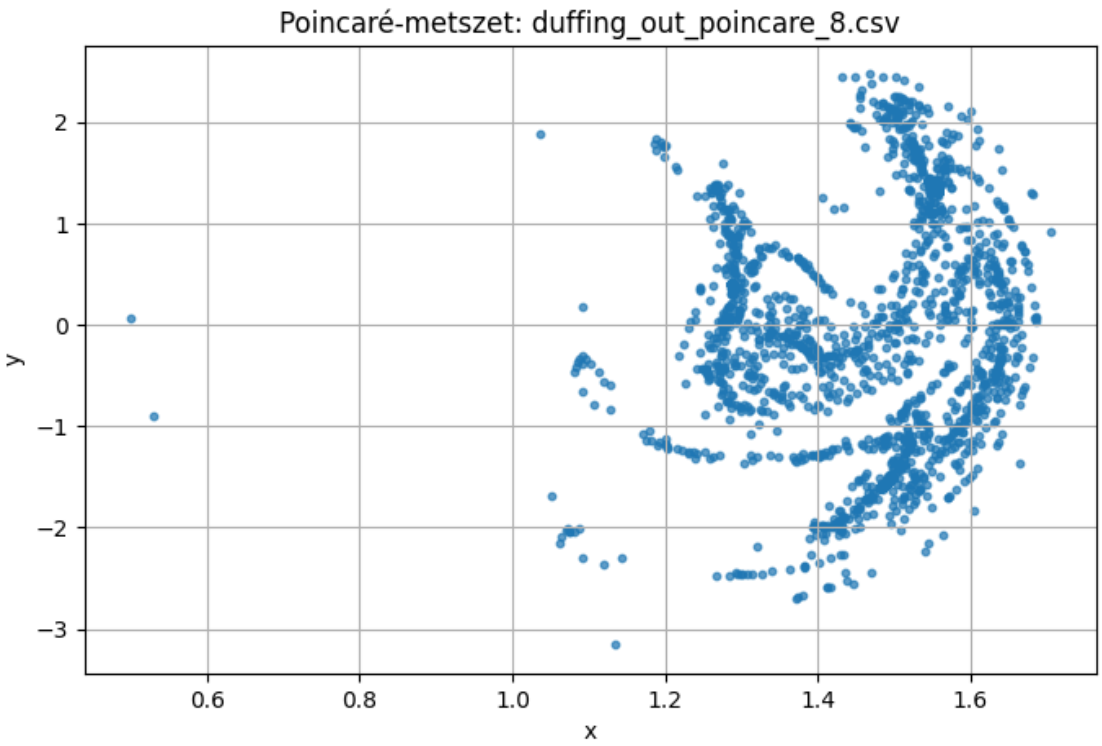
0.20 Poincaré-metszet – `duffing_out_poincare_7.csv`

[21]:
```
# Poincaré-metszet - duffing_out_poincare_7.csv
df = pd.read_csv("duffing_out_poincare_7.csv")
plt.figure(figsize=(8, 5))
plt.scatter(df['x'], df['y'], s=10, alpha=0.7)
plt.title("Poincaré-metszet: duffing_out_poincare_7.csv")
plt.xlabel("x")
plt.ylabel("y")
plt.grid(True)
plt.show()
```



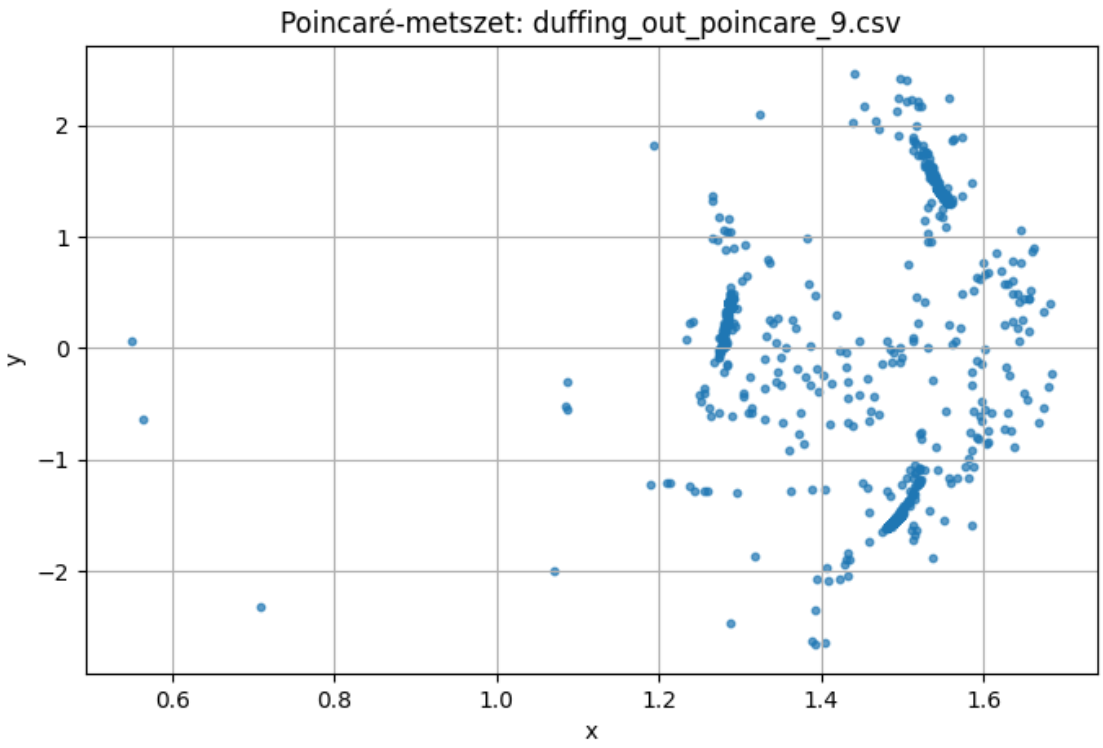
0.21 Poincaré-metszet – `duffing_out_poincare_8.csv`

[22]:
```
# Poincaré-metszet - duffing_out_poincare_8.csv
df = pd.read_csv("duffing_out_poincare_8.csv")
plt.figure(figsize=(8, 5))
plt.scatter(df['x'], df['y'], s=10, alpha=0.7)
plt.title("Poincaré-metszet: duffing_out_poincare_8.csv")
plt.xlabel("x")
plt.ylabel("y")
plt.grid(True)
plt.show()
```



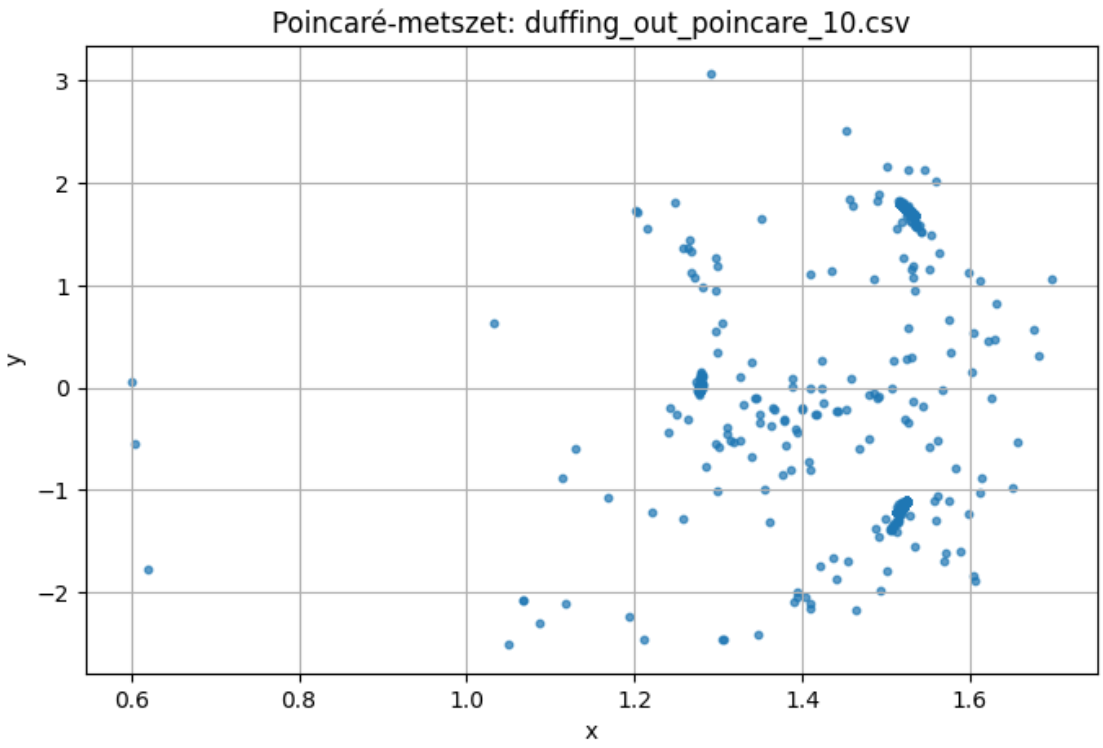
0.22 Poincaré-metszet – `duffing_out_poincare_9.csv`

[23]:
```
# Poincaré-metszet - duffing_out_poincare_9.csv
df = pd.read_csv("duffing_out_poincare_9.csv")
plt.figure(figsize=(8, 5))
plt.scatter(df['x'], df['y'], s=10, alpha=0.7)
plt.title("Poincaré-metszet: duffing_out_poincare_9.csv")
plt.xlabel("x")
plt.ylabel("y")
plt.grid(True)
plt.show()
```



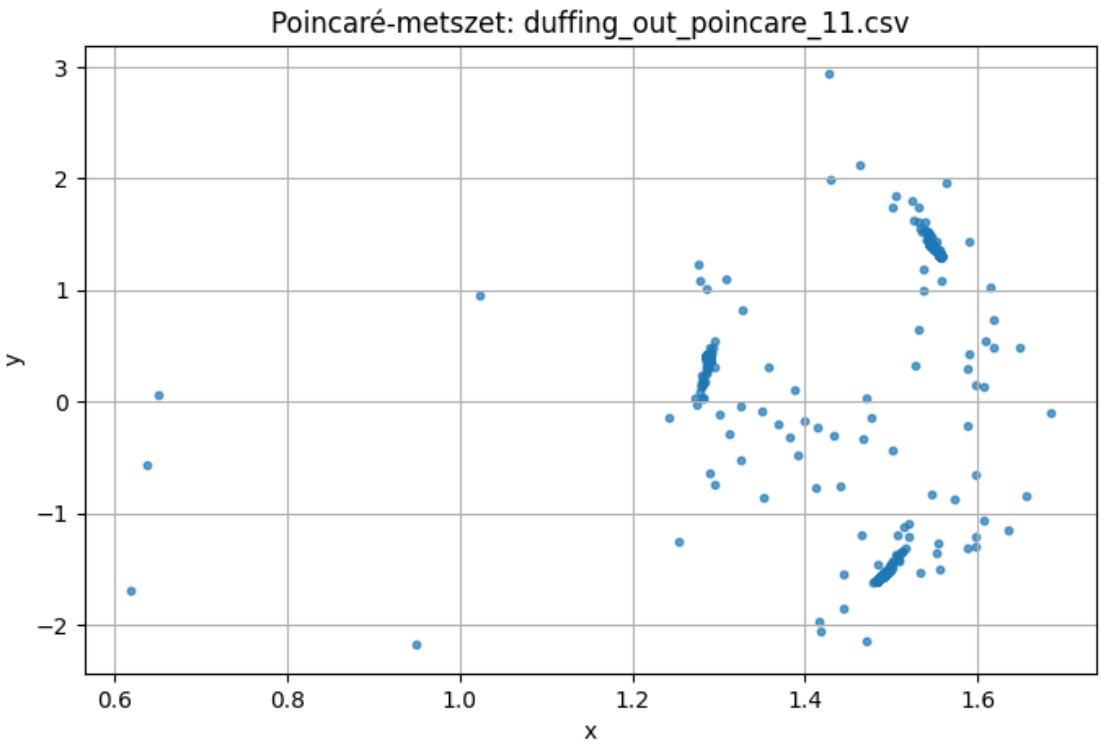
0.23 Poincaré-metszet – duffing_out_poincare_10.csv

[24]:
```
# Poincaré-metszet - duffing_out_poincare_10.csv
df = pd.read_csv("duffing_out_poincare_10.csv")
plt.figure(figsize=(8, 5))
plt.scatter(df['x'], df['y'], s=10, alpha=0.7)
plt.title("Poincaré-metszet: duffing_out_poincare_10.csv")
plt.xlabel("x")
plt.ylabel("y")
plt.grid(True)
plt.show()
```



0.24 Poincaré-metszet – duffing_out_poincare_11.csv

[25]:
```
# Poincaré-metszet - duffing_out_poincare_11.csv
df = pd.read_csv("duffing_out_poincare_11.csv")
plt.figure(figsize=(8, 5))
plt.scatter(df['x'], df['y'], s=10, alpha=0.7)
plt.title("Poincaré-metszet: duffing_out_poincare_11.csv")
plt.xlabel("x")
plt.ylabel("y")
plt.grid(True)
plt.show()
```


Poincaré-metszet: duffing_out_poincare_11.csv
3
2
1
0
−1
−2
y
0.6
0.8
1.0
1.2
1.4
1.6
x